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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/257,108 02/24/99 CHAUDHARI R U-012119-9

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IM22/1213

EXAMINER

DONELY, C

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 12/13/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/257,108

Applicant(s)

CHAUDHARI ET AL.

Examiner

Cynthia M Donley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☒ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 14) ☒ Notice of References Cited (PTO-892)
- 15) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 16) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 17) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 18) ☐ Notice of Informal Patent Application (PTO-152)
- 19) ☐ Other: _____

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DETAILED ACTION

Specification

1. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(1). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.
2. The abstract of the disclosure is objected to because "hydrogenation" on line 2 should be changed to --hydrogenation--. Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claim 2 is objected to because of the following informalities:
 - Claim 2, line 10, "of source of copper" should be changed to --of a source of copper--.
 - Claim 2, line 11, "of source of chromium" should be changed to --of a source of chromium--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 1, line 1, "improved" is unclear in that it is not being compared to another catalyst in the claims.
- Claim 1, line 8, and Claim 2, line 9, the recitation "characterised by" renders the claim indefinite as it is not clear whether the recitations following it are required or optional, it is suggested that "characterised by" be changed to – having an—to positively recite that what follows is not optional
- Claim 2, line 1, "improved" is unclear in that it is not being compared to another catalyst in the claims.
- Claim 2 recites the limitation "the precipitate" in lines 12 and 13. There is insufficient antecedent basis for this limitation in the claim.
- Claim 2, line 13, it is not clear what precipitation methods are defined as "conventional methods."
- Claim 2 recites the limitation "the product" in lines 15-16. There is insufficient antecedent basis for this limitation in the claim.
- Claim 2, line 19, "this mixture" lacks antecedent basis as no mixture has been recited or suggested.
- Claims 3-6 recite "A process as claimed in claim 1" whereas a process is not claimed in claim 1, a product is, thus, claims 3-6 are unclear – it appears they should depend from claim 2.

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- Claim 6, "the source of precipitating agent" lacks antecedent basis as no precipitating agent has been recited in the claims.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawai et al in view of Rashkin. Kawai et al teaches substantially the claimed subject matter except the percentages of chromium and zinc and the method for preparing the catalyst.

Kawai et al teaches a catalyst containing copper, chromium, aluminum and zinc (column 4, lines 39-53), wherein copper comprises 20 to 80 mole % of the catalyst which overlaps the range of 10 to 40 mole % of the instant invention (column 5, lines 17-18) and aluminum comprises 0.5 to 20 mole % which overlaps the range of 10 to 30 mole % of the instant invention (column 5, lines 24-27). Kawai et al teaches that the source of copper may be salts of copper, including copper nitrate, copper sulfate or copper chloride (column 5, lines 40-42). The source of

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aluminum may be aluminum oxide (column 5, line 31). The source of zinc may be zinc oxide (column 4, line 43).

Rashkin teaches a copper-chromium-zinc-barium catalyst, wherein copper comprises 30 to 55 mole % of the catalyst, chromium comprises 30 to 57 mole % and zinc comprises 1 to 13 mole % (abstract, lines 5-8). Each of these ranges overlaps the ranges of the instant invention. It is inherent to include copper, chromium, zinc and aluminum such that the total percentage of the components is 100% if these are the only components in the catalyst as taught by Kawai et al. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include chromium and zinc in the proportions taught by Rashkin in the catalyst of Kawai et al because these proportions result in a more effective catalyst.

Rashkin teaches a process for preparing the above catalyst which comprises preparing aqueous solutions of the starting components (aluminum, copper and zinc), and adding to this mixture a solution of chromium (ammonium dichromate), under stirring conditions to obtain the precipitate, separating the precipitate by conventional methods, drying the precipitate at a temperature around 110oC, calcining the dried material in static air at a temperature ranging from 250 to 400oC for at least 2 hours, to obtain the desired product (column 4, lines 31-44). It would have been obvious to one of ordinary skill in the art at the time the invention was

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made to prepare the catalyst of Kawai et al by the process taught by Rashkin because this process results in a catalyst having improved selectivity and strength. It is inherent that the catalyst of Kawai et al and Rashkin would exhibit an XRD pattern as shown in the instant invention because the catalyst of the prior art has the same components and is prepared in a similar manner.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rutzen et al (US 4825004), Schneider et al (US 5217937), Ito et al (US 5663458), Kleemiss et al (US 5767326) and Haluska et al (US 5820749) have been considered as relevant prior art.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia M Donley whose telephone number is (703) 305-0214. The examiner can normally be reached on M-R and alternate F, 8:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (703) 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0661.

CMD

December 9, 1999



STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

12/10/99